Claims

WO 2005/099302

5

10

15

- 1. A communications unit comprising
- a first housing part with a speaker transducer arranged in the first housing part to output sound signals through one or more sound openings in a housing wall of the first housing part, and

7

PCT/EP2005/002601

- a second housing part movably connected to the first housing part so that the first and second housing parts can be moved to assume a closed position, in which the second housing part covers the one or more sound openings, and moved apart to assume an open position, in which the one or more sound openings are exposed,
- c h a r a c t e r i z e d in that the first and second housing parts, when in the closed position, together with the speaker transducer define a closed cavity with an opening (15, 25) connecting the cavity to the ambient air, where the cavity and the opening (15, 25) form a resonator with a resonance frequency and a resonance bandwidth.
- 2. A communications unit according to claim 1 c h a r a c t e r i z e d in that the cavity comprises a space between the housing wall and the transducer.
- 3. A communications unit according to claim 1 or 2 c h a r a c -20 t e r i z e d in that the cavity comprises a space between the housing wall and the second housing part.
 - 4. A communications unit according to any one of claims 1-3 c h a r a c t e r i z e d in that the opening (15, 25) connecting the cavity to the ambient air is a tube in one of the first and second parts.
- 25 5. A communications unit according to any one of claims 1-4 c h a r a c t e r i z e d in that a groove in one of the first and second parts forms the

opening (15, 25) connecting the cavity to the ambient air, when the first and second parts assume the closed position.

8

PCT/EP2005/002601

WO 2005/099302

- 6. A communications unit according to any one of claims 1-5 c h a r a c t e r i z e d in that the resonator is a Helmholtz resonator.
- 7. A communications unit according to any one of claims 1-5 c h a r a c t e r i z e d in that the cavity is capable of supporting standing waves in the resonator at an integer multiple of a quarter of the wavelength at the resonance frequency.